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EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03.12.2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,469

Applicant(s)

Asrar et al

Examiner

T. Yoon

Group Art Unit

1714

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 2-25-03

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 50-75 is/are pending in the application.

☐ Of the above claim(s) is/are withdrawn from consideration.

☐ Claim(s) is/are allowed.

☒ Claim(s) 50-75 is/are rejected.

☐ Claim(s) is/are objected to.

☐ Claim(s) are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s).

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-800

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 65 and 68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited % elongation has little probative value absent particular sample and/or test method since said % elongation is dependent on the sample. For example, a fiber would stretch (elongate) more than a dog-bone shape sample. Also, it is dependent on how to pull it, and note that it is not same as "% elongation at break".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 64-75 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 6157878A2.

Submission of above JP is required.

Applicant states that said JP teaches a resin composition comprising P3HB(97-85mol%)4HB(3-15mol%) and 0.5 to 3 wt% of boron nitride particles, but an elongation.

However, the instant elongation property is an inherent property of JP resin.

The recited % elongation has little probative value absent particular sample and/or test method since said % elongation is dependent on the sample. One can elongate a fiber or film made of JP resin to 600% for example, and the recitation of an inherent property of the known composition cannot overcome the rejection.

The examiner notices that the recited 1100% may be based on the example 24, table 7 wherein "Elongation at break on hot pressed films after 1 day". Said example 24 shows **13% 4HB** and **1% (1 phr)** boron nitride which is taught by JP as stated by applicant.

Thus, the instant invention lacks novelty.

Claims 50-75 are rejected under 35 U.S.C. 103(a) as obvious over JP 6157878A2 alone, or in view of JP 4-326932, JP 6-336523 or Hammond et al (US 5,753,782).

The instant invention further recites 16-99% of 4HB unit and 0.1 wt% of a nucleant over JP'878. However, the instant copolymer having various mol% of 4 HB unit is well known as

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25). Also, the utilization of 0.1 wt% (phr) of nucleants such as boron nitride is well known as taught by Hammond et al, col. 6, lines 47-53.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to modify mol% of 4 HB or an amount of a boron nitride in JP'878 with or without teaching of JP'932, JP'523 or Hammond et al since modifying an amount of a comonomer of copolymer and of a boron nitride (nucleant) is a routine practice depending on the desired properties. For example, a lesser amount of a nucleant would yield a higher amorphous region, and a lesser amount of 4 HB, a lower Tg as taught by JP'523.

Claims 50-75 are rejected under 35 U.S.C. 103(a) as obvious over JP 4-326932 or JP 6-336523 in view of Hammond et al (US 5,753,782) or JP 6157878A2.

JP'932 and JP'523 teach the instant P3HB4HB. The instant invention further recites the use of a nucleant such as boron nitride over JP'932 and JP'523. However, the use of a nucleant in thermoplastic compositions in order to adjust crystallinity is well known practice, and Hammond et al and JP 6157878A2 teach the use of a boron nitride in P3HB4HB.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize the art well known nucleant such as boron nitride of Hammond et al or JP 6157878A2 in JP'932 and JP'523 since it is well known practice.

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Claims 50-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaoka et al (US 5,688,582) in view of JP 4-326932, JP 6-336523, Hammond et al (US 5,753,782) or JP 6157878A2.

Nagaoka et al teach biodegradable filament nonwoven fabrics from polyester compositions in abstract. The use of nucleants such as boron nitride is taught at col. 8, lines 17-23. Various polyesters including the instant copolymer of 3HB and 4HB are taught at col. 5, lines 56 and 59-62.

JP'932 and JP'523 teach the instant P3HB4HB, and Hammond et al and JP 6157878A2 teach various amounts of boron nitride..

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize the art well known amount of nucleant such as boron nitride of Hammond et al or JP 6157878A2 in Nagaoka et al since Nagaoka et al teach the use of nucleants such as boron nitride, or to use the P3HB4HB of JP'932 and JP'523 in Nagaoka et al since Nagaoka et al various polyesters including the copolymer of 3HB and 4HB.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

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Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/March 10, 2003

Jack H. Yoon
JAE H. YOON
PRIMARY EXAMINER